

# **Uranium Enrichment Decontamination and Decommissioning**

**Department of Energy**  
**FY 1998 Budget Request to Congress**  
(discretionary dollars in thousands)

	FY 1996 Current Appropriation	FY 1996 Comparable Appropriation	FY 1997 Current Appropriation	FY 1997 Comparable Appropriation	FY 1998 Request
Uranium Supply And Enrichment Activities					
Uranium enrichment activities	90,314	—	56,466	—	—
Program direction	—	—	4,000	—	—
Subtotal, Uranium Supply And Enrichment Activities	90,314	—	60,466	—	—
Revenues - Sales	—	—	-42,200	—	—
Use of prior year balances	-26,303	—	-17,266	—	—
Total, Uranium Supply And Enrichment Activities	64,011	—	1,000	—	—
Uranium Enrichment Decontamination and Decommissioning Fund	278,807	278,807	200,200	200,200	248,788

DEPARTMENT OF ENERGY  
FY 1998 CONGRESSIONAL BUDGET REQUEST  
URANIUM ENRICHMENT DECONTAMINATION AND DECOMMISSIONING FUND

PROPOSED APPROPRIATION LANGUAGE

For necessary expenses in carrying out uranium enrichment facility decontamination and decommissioning, remedial actions and other activities of title II of the Atomic Energy Act of 1954 and title X, subtitle A of the Energy Policy Act of 1992 [\$200,200,000] \$248,788,000, to be derived from the Fund, to remain available until expended: *Provided*, That [\$34,000,000] \$40,000,000 of amounts derived from the Fund for such expenses shall be available in accordance with title X, subtitle A, of the Energy Policy Act of 1992. (*Energy and Water Development Appropriations Act, 1997.*)

EXPLANATION OF CHANGE

No material changes to the appropriation language.

DEPARTMENT OF ENERGY  
FY 1998 CONGRESSIONAL BUDGET REQUEST  
URANIUM ENRICHMENT DECONTAMINATION AND DECOMMISSIONING  
(Tabular dollars in thousands, narrative in whole dollars)

ENVIRONMENTAL RESTORATION

PROGRAM MISSION

The Uranium Enrichment Decontamination and Decommissioning (UE D&D) activity, supports decommissioning activities, remedial actions, waste management efforts, landlord requirements at the K-25 site, recycling activities, program management and technical support necessary for effective management, and surveillance and maintenance (S&M) efforts associated with pre-existing conditions at three gaseous diffusion plants owned by the Department of Energy (DOE) located at Oak Ridge, Tennessee; Paducah, Kentucky; and Portsmouth, Ohio. The UE D&D activity is managed under the Environmental Restoration (ER) program within DOE's Environmental Management (EM) program. The overall ER program within EM receives funding from three appropriation accounts: the Uranium Enrichment Decontamination and Decommissioning Fund appropriation account, referred to as the "UE D&D" account; the Defense Environmental Restoration and Waste Management appropriation account, referred to as the "Defense" account; and the Energy Supply, Research and Development appropriation account, referred to as the "Non-Defense" account.

The overall mission of the ER program is to protect human health and the environment from risks posed by inactive and surplus DOE-owned and privately- owned sites, facilities, and contaminated areas. These sites, facilities, and contaminated areas must be remediated and decommissioned in the most cost-efficient and responsible manner possible in order to provide for future beneficial use.

The UE D&D activity budget request includes: funds to carry out efforts that must be undertaken immediately to minimize or prevent significant risk to workers, the public or the environment; activities required by current Federal, State, and local regulatory agreements (in place or in negotiation); and support of other legal requirements, and DOE Orders. Also included in this budget activity is funding for reimbursement of Uranium/Thorium licensees for the Federal Government's share of their remediation costs. Activities supported are explained in more detail in the UE D&D Program Performance Summary which follows this introduction.

For additional information on the overall ER program, supported from the three appropriation accounts, please refer to the ER Program Mission statement for the "Defense" account. This introduction shows how the various activities funded from the three different accounts fit together, and identifies how performance is measured and progress achieved. Tables PM-1 through PM-6 (which immediately follow the ER Defense Program Mission statement) provide data that displays the status of the various ER program activities, cleanup versus assessment trends, and progress being achieved from a "National Perspective" regardless of the appropriation account.

## EM PROGRAM VISION:

The EM program has been collecting data to assimilate into a Ten Year Plan which will layout timetables to complete cleanup at most sites within the next decade. This Ten Year Plan is central to bridging efforts of the past few years to the types of cleanups and time frames EM will encounter through 2006. Major changes have taken place over the last three years to improve the pace of cleanup, manage projects more effectively, eliminate inefficiencies and incorporate risk into decision-making. All of those efforts have made EM more successful at producing on-the-ground tangible results. Under the Ten Year Plan “vision,” EM will complete cleanup at most sites within a decade, though treatment will continue for the few remaining waste streams at a small number of sites. This unifying vision will drive budget decisions, sequencing of projects, and actual actions taken to meet program objectives. This “vision” will be implemented in collaboration with regulators and stakeholders.

The EM vision will be guided by the following seven principles:

- Eliminate the most urgent risks
- Reduce mortgage and support costs to free up resources for further risk reduction
- Protect worker health and safety
- Reduce the generation of waste
- Create a collaborative relationship between DOE and its regulators and stakeholders
- Focus technology development on cost and risk reduction
- Integrate waste treatment and disposal across sites.

The overall ER program is responsible for remediation of 132 geographic sites in 31 states and the territory of Puerto Rico. A graphical depiction can be found in Table PM-1 following the ER “Defense” Program Mission statement. The program responsibilities in the UE D&D activity includes three of these geographic sites in three states. Of these three sites, the Oak Ridge Reservation is jointly funded by all three appropriation accounts.

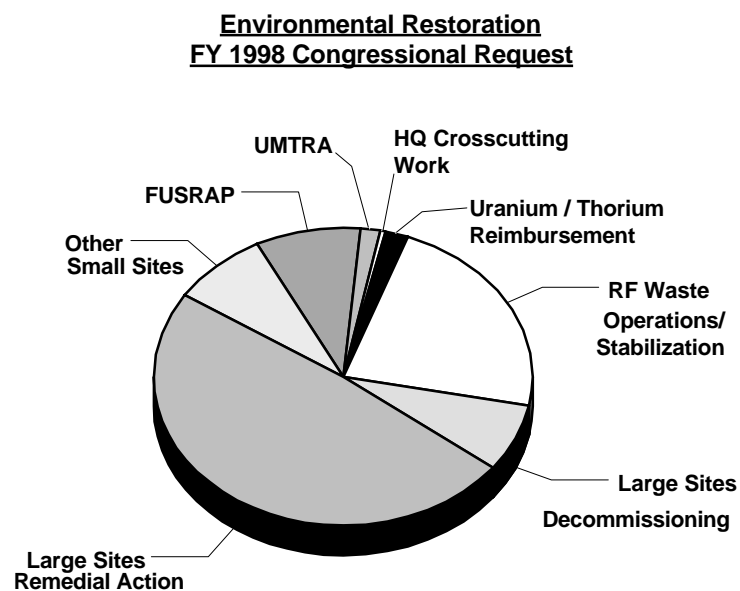
To provide maximum flexibility in addressing remediation efforts, all activities are budgeted under operating expenses and include capital equipment-type and construction-type activities. This is consistent with the manner in which ER activities were budgeted and approved by Congress in previous years. General crosscutting support efforts required for effective management and control of ER activities are also included in this budget.

## PROGRAM SHIFTS - NEW PERFORMANCE MEASURES

Consistent with the ER Strategic Plan, the ER program has been subdivided into several Strategic Program Areas: the Uranium Mill Tailings Remedial Action (UMTRA) program - 24 sites; the Formerly Utilized Sites Remedial Action Program (FUSRAP) - 46 sites; Other Small Sites - 47 sites; and 15 Large Sites composed of remedial action and decommissioning programs. Beginning in FY 1997, the ER program also includes the budget for the entire Rocky Flats, Colorado site. The ER activity also includes funding for reimbursement of Uranium/Thorium licensees for the Federal Government's share of their remediation costs; the Federal Contribution to the UE D&D account; and headquarters crosscutting activities.

The components of the overall ER program included in the FY 1998 request and their relative portion of that request are shown in the following table and pie chart. The "UE D&D" activities are found in the Large Sites Remedial Action; the Large Sites Decommissioning; and the Uranium/Thorium Reimbursement components.

ER Components	FY 1996 Current Appropriation	FY 1997 Current Appropriation	FY 1998 Congressional Request
UMTRA	\$66,746	\$49,788	\$33,778
FUSRAP	73,462	75,085	182,079
Other Small Sites	198,394	144,946	174,303
Large Sites Remedial Action	1,150,708	1,049,160	1,005,010
Large Sites Decommissioning	177,064	113,201	153,255
Rocky Flats Waste Operations/Stabilization Efforts	0	432,340	465,100
Uranium/Thorium Reimbursement	42,000	34,000	40,456
Federal Contribution to the UE D&D Appropriation Account	350,000	376,648	388,000
Headquarters Crosscutting Work	36,262	15,226	9,005
<b>Request</b>	<b>2,094,636</b>	<b>2,290,394</b>	<b>2,450,986</b>
<b>UE D&amp;D Account Offset</b>	<b>-350,000</b>	<b>-376,648</b>	<b>-388,000</b>
<b>Total Work Scope Requested</b>	<b>\$1,744,636</b>	<b>\$1,913,746</b>	<b>\$2,062,986</b>



NOTE: Reflects funding from the Defense, Non-Defense, and the UE D&D appropriation accounts.

The ER program has demonstrated significant cleanup progress in the UMTRA, FUSRAP, and Other Small Sites Strategic Program Areas. This has been achieved primarily by completion of remediation at numerous “release sites” and “facilities”, ultimately leading to the completion of entire geographic sites each year. “Release sites” represent discrete areas of contamination at a particular geographic site, and “facilities” are contaminated structures. Results in the Large Sites Remedial Action and Large Sites Decommissioning Program Areas are also measured by completion of “release sites” and “facilities”, but overall completion of these large geographic sites won’t be achieved for some time. Performance is tracked in all Strategic Program Areas by measuring annual “release site” and “facility” completions.

ER Strategic Program Area	No. of Sites	No. of Release Sites	No. of Facilities	Total Environmental Restoration Program Summary/Description of Scope
UMTRA (Non-Defense)	24	48	0	<ul style="list-style-type: none"> <li>24 geographic sites requiring both surface remediation and verification of compliance with groundwater standards.</li> <li>Through FY 1996, surface remediation at 16 of the 24 geographic sites was completed.</li> </ul>
FUSRAP (Non-Defense)	46	46	0	<ul style="list-style-type: none"> <li>46 formerly utilized sites in 14 states that have been identified as part of the FUSRAP Program.</li> <li>Through FY 1996, cleanup at 23 of the 46 geographic sites was completed.</li> </ul>
Other Small Sites (Defense/ Non-Defense)	47	1,356	199	<ul style="list-style-type: none"> <li>47 sites have been classified as Other Small Sites based on estimated cost of completion of \$150M or less.</li> <li>These sites have relatively short project durations, small lifecycle costs, and are well defined.</li> <li>Through FY 1996, 13 Other Small Sites have been completed (excluding long-term surveillance and monitoring) including the recent completions of the Oxnard facility in California and the Inhalation Toxicology Research Lab in New Mexico. The 47 Other Small Sites are comprised of 1,356 release sites and 199 facilities. As of the end of FY 1996, 70% of all Other Small Site release sites (957) and 42% of all facilities (84) have been completed.</li> <li>The objective of this category, which includes both Defense and Non-Defense efforts, is to reduce relative risk and demonstrate progress by completion of another 25 small sites (about 19% of total ER geographic sites) from FY 1995 to the end of FY 2000.</li> </ul>
Large Sites* Remedial Action	15	7,376	891	<ul style="list-style-type: none"> <li>15 geographic sites have been classified as Large Sites based on estimated cost of completion and/or complexity, and 10 of the 15 Large Sites have decommissioning programs, specifically focused on facilities and structures.</li> <li>Large Sites are the largest segment of Environmental Restoration responsibility and include sites with widely varied risk potential, and possible large volumes of waste. They are typically driven by legal statutes and agreements.</li> <li>The objectives of this category are to sequence work based on relevant attributes and maintain or reduce the current risk state at each site.</li> <li>Over 7,376 release sites comprise the Large Sites components of the ER program.</li> <li>Through FY 1996, 29% (2,149) release sites have been completed.</li> </ul>
Large Sites* Decommissioning				<ul style="list-style-type: none"> <li>Decommissioning activities represent the largest potential for reducing fixed infrastructure costs and, therefore, reducing the outyear mortgage. Over 891 facilities comprise the Large Sites component of the ER program. Through FY 1996, 17% (155) facilities have been completed.</li> <li>The objectives of this category are to reduce long-term mortgage, address high risks, and maintain cost-effective funding levels.</li> </ul>
TOTAL	132	8,826	1,090	Excludes Rocky Flats Waste Operations/Stabilization efforts
TOTAL Release Site/Facilities		9,916		

\*Funded by the Defense, Non-Defense, and the UE D&D appropriation accounts

The ER

Program Performance Summary for the “UE D&D” activity following this section provides additional program specific information and tables showing cleanup versus assessment trends, funding by major ER component, and geographic site completion data.

DEPARTMENT OF ENERGY  
FY 1998 CONGRESSIONAL BUDGET REQUEST  
URANIUM ENRICHMENT DECONTAMINATION AND DECOMMISSIONING  
(Tabular dollars in thousands, narrative in whole dollars)

PROGRAM PERFORMANCE SUMMARY

The UE D&D activity, supports decommissioning efforts, remedial actions, waste management efforts, K-25 landlord requirements, recycling activities, a prudent amount of program management and technical support necessary for effective management, and S&M efforts associated with pre-existing conditions at the three gaseous diffusion plants owned by the DOE and located at Oak Ridge, Tennessee; Paducah, Kentucky, and Portsmouth, Ohio. As required by the Energy Policy Act of 1992, the Department completed a comprehensive environmental audit at the Paducah and Portsmouth plants prior to the lease of facilities at those plants to the United States Enrichment Corporation. The audit documented existing and future liabilities attributable to past practices for which the Department retains remediation responsibility.

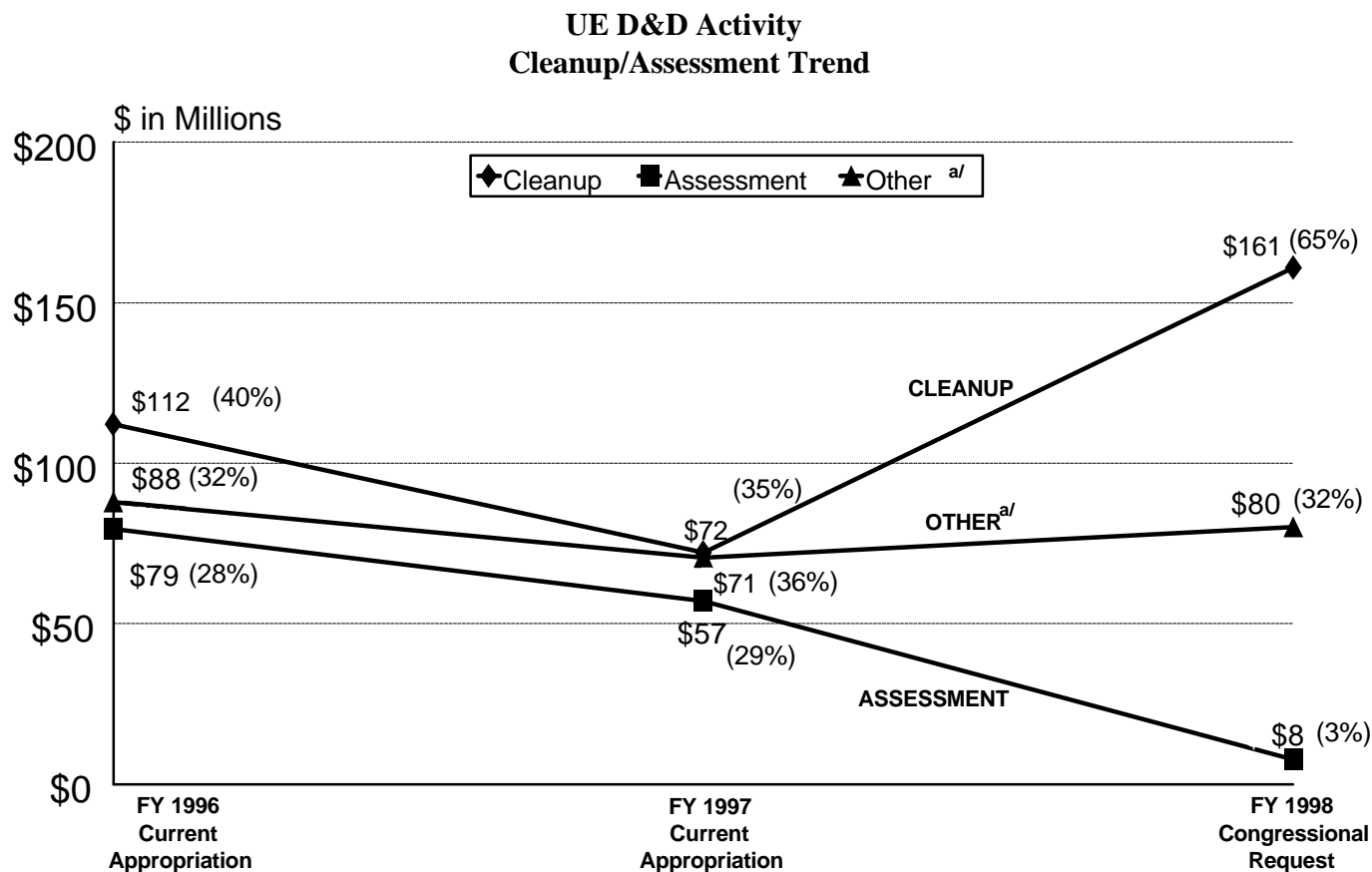
The Energy Policy Act of 1992 authorizes annual deposits into the UE D&D account of up to \$480 million annually adjusted for inflation. Domestic utilities are to be assessed up to \$150 million per year (adjusted for inflation) for 15 years based on their purchase of Department-produced separative work units. The remainder of the annual deposit, currently estimated at approximately \$388 million (in FY 1998 dollars) was authorized to come from annual appropriations, and is included in the Environmental Restoration budget request within the Defense Environmental Restoration and Waste Management appropriation. This amount referred to as the "Federal Contribution to the UE D&D appropriation account" elsewhere in the EM submission.

The Energy Policy Act of 1992 (Title X, Subtitle A) also requires the DOE to develop and administer a reimbursement program for active uranium and thorium processing sites defined under Title II of the Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978 (Title II sites) which sold uranium and thorium to the United States Government. The purpose of this program is to assist Title II site owners by compensating them on a per-ton basis for the restoration costs of only those tailings resulting from sale of materials to the Federal Government. Each site licensee's maximum reimbursement is based on the short tons of dry tailings on the site attributable to sales of nuclear material to the Federal Government. The Energy Policy Act of 1992 directed that funding for this reimbursement be taken from the UE D&D appropriation.

The following UE-1 & UE-2 tables provide specific "UE D&D" information relating to assessment versus cleanup funding, overall fiscal year funding, and components of the "UE D&D" activity.

TABLE UE-1  
UE D&D ACTIVITY - FY 1998 CONGRESSIONAL BUDGET REQUEST

All ER efforts are pursued with the goal of ensuring efficiency and maximizing the use of funds to achieve results. The ER program has demonstrated this by continuing to increase the amount of funds spent on cleanup activities and focusing on streamlining assessment and characterization activities. The UE D&D activity is a major part of this increased emphasis on cleanup.



a/ Other—consists of program management, uranium/thorium reimbursement, landlord, surveillance and maintenance, etc.

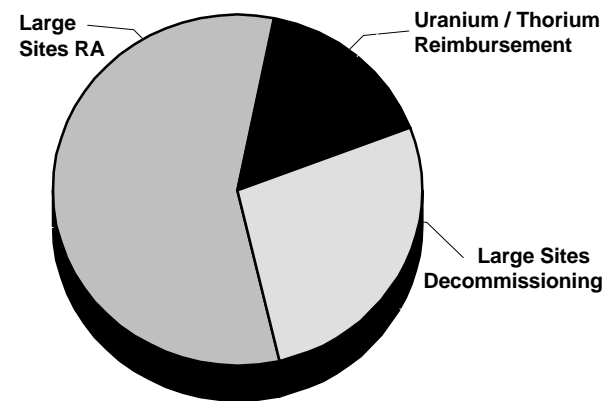
TABLE UE-2  
UE D&D ACTIVITY- FY 1998 CONGRESSIONAL BUDGET REQUEST

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### Components of the UE D&D Activity

UE D&D Components	FY 1996 Current Appropriation	FY 1997 Current Appropriation	FY 1998 Congressional Request
Large Sites RA	\$162,333	\$129,916	\$140,805
Large Sites Decomm.	74,474	36,284	67,527
Uranium/Thorium Reimb.	42,000	34,000	40,456
Request	\$278,807	\$200,200	\$248,788

FY 1998 Congressional Request



DEPARTMENT OF ENERGY  
FY 1998 CONGRESSIONAL BUDGET REQUEST  
URANIUM ENRICHMENT D&D ACCOUNT  
(Dollars in Thousands)

ENVIRONMENTAL RESTORATION

PROGRAM FUNDING PROFILE

	<u>FY 1996 Current Appropriation</u>	<u>FY 1997 Original Appropriation</u>	<u>FY 1997 Adjustments</u>	<u>FY 1997 Current Appropriation</u>	<u>FY 1998 Request</u>
<u>Facilities and Sites</u>					
Large Site Remedial Action	\$162,333	\$129,916	\$0	\$129,916	\$140,805
Large Site Decommissioning	74,474	36,284	0	36,284	67,527
Uranium/Thorium Reimbursement	42,000	34,000	0	34,000	40,456
 <i>Total, UE D&amp;D Account Environmental Restoration</i>	 <i>\$278,807</i>	 <i>\$200,200</i>	 <i>\$0</i>	 <i>\$200,200</i>	 <i>\$248,788</i>

DEPARTMENT OF ENERGY  
FY 1998 CONGRESSIONAL BUDGET REQUEST  
URANIUM ENRICHMENT D&D ACCOUNT  
(Tabular dollars in thousands, narrative in whole dollars)

ENVIRONMENTAL RESTORATION

PROGRAM FUNDING BY SITE

Program Activity	FY 1996 Adjusted Approp	FY 1997 Original Approp	FY 1997 Adjustments	FY 1997 Current Approp	FY 1998 Budget Request
OAK RIDGE OPERATIONS OFFICE					
K-25 Site (TN)	\$89,806	\$53,700	\$0	\$53,700	\$84,946
Oak Ridge Operations Office (TN)	44,049	24,880	0	24,880	28,552
Oak Ridge Reservation (TN) (Off-Site)	322	60	0	60	172
Paducah Gaseous Diffusion Plant (KY)	46,276	40,560	0	40,560	46,691
Portsmouth Gaseous Diffusion Plant (OH)	56,354	47,000	0	47,000	47,971
Subtotal, Oak Ridge	<u>\$236,807</u>	<u>\$166,200</u>	<u>\$0</u>	<u>\$166,200</u>	<u>\$208,332</u>
HEADQUARTERS					
Uranium/Thorium Reimbursement (TN)	<u>\$42,000</u>	<u>\$34,000</u>	<u>\$0</u>	<u>\$34,000</u>	<u>\$40,456</u>
Subtotal, Headquarters	<u>\$42,000</u>	<u>\$34,000</u>	<u>\$0</u>	<u>\$34,000</u>	<u>\$40,456</u>
<b><i>TOTAL, ENVIRONMENTAL RESTORATION</i></b>	<b><u><u>\$278,807</u></u></b>	<b><u><u>\$200,200</u></u></b>	<b><u><u>\$0</u></u></b>	<b><u><u>\$200,200</u></u></b>	<b><u><u>\$248,788</u></u></b>

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URANIUM ENRICHMENT DECONTAMINATION AND DECOMMISSIONING

ENVIRONMENTAL RESTORATION - UE D&D

ACRONYMS

CMI	Corrective Measures Implementation
CMS	Corrective Measures Study
D&D	Decontamination and Decommissioning
EPA	Environmental Protection Agency
GDP	Gaseous Diffusion Plant
LLW	Low-Level Waste
NE	North East
NW	North West
ORO	Oak Ridge Operations Office
PCB	Polychlorinated Biphenyls
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
S&M	Surveillance and Maintenance
SWMU	Solid Waste Management Unit
TSCA	Toxic Substances Control Act
WAG	Waste Area Group

U.S. DEPARTMENT OF ENERGY  
FY 1998 CONGRESSIONAL BUDGET REQUEST  
URANIUM ENRICHMENT DECONTAMINATION AND DECOMMISSIONING

ENVIRONMENTAL RESTORATION - UE D&D  
(Dollars in Thousands)

OAK RIDGE

I. Mission Supporting Goals and Objectives

Uranium Enrichment Decontamination and Decommissioning activities primarily managed by the Oak Ridge Operations Office (ORO) are conducted at three sites; the K-25 in Tennessee; the Paducah Gaseous Diffusion Plant (GDP) in Kentucky, and the Portsmouth GDP in Ohio. Major contaminants at the sites include radionuclides from past uranium enrichment operations and hazardous chemicals associated with any major industrial process including solvents such as trichlorethylene and trichloroethane. This budget request also provides for technical integration and support to the three GDP's which is administered directly by the ORO.

The K-25 site occupies 640 acres adjacent to the Clinch River, and is located approximately 13 miles west of Oak Ridge, Tennessee. Production of enriched uranium at the site ceased in 1985 and the facilities were permanently shutdown in 1987. One major objective at the site is to ensure that the facilities remain in a safe condition while awaiting decontamination and decommissioning (D&D). Other major activities include soil and ground water remediation. There are 103 potential release sites and 131 facilities at the K-25 sites. Through FY 1998, eight release sites and 36 facilities are forecast for completion. In FY 1998, decontamination of three of the major process buildings (K-29, K-31 and K-33) will be initiated, including the removal and decontamination of the process equipment.

The Paducah GDP, located approximately 15 miles west of Paducah, Kentucky continues to produce enriched uranium on the 750 acre site. The major environmental restoration activities at this site involve the cleanup of contaminated ground water and soils and treatment and disposal of legacy wastes. There are currently 157 potential release sites and two facilities at Paducah. Through FY 1998, remediation at 14 release sites are forecast for completion. Cleanup of contaminated ground water, including containment and treatment of the Department's largest off-site ground water plume is a major cleanup effort at Paducah.

The Portsmouth GDP is located approximately 20 miles north of Portsmouth, Ohio and occupies 640 acres. The Portsmouth GDP is also still producing enriched uranium. Environmental restoration activities at this site includes cleanup of contaminated soils and ground water and treatment and disposal of legacy wastes. There are currently 80 potential release sites and four facilities at the Portsmouth site requiring possible action. Preventing off-site migration of contaminants through ground water is the primary focus of environmental restoration activities at Portsmouth. To date, no off-site contamination has been detected.

The ORO managers, coordinates, tracks, and assists in the implementation of the Environmental Restoration program among the three GDP sites. Compliance oversight expenses and a prudent amount of program management support is provided to assist in the integration of activities being carried out at the three GDPs. In addition, the ORO manages oversight agreements with the States of Tennessee, Ohio, and Kentucky. Remediation waste is also being treated and disposed. On-site disposal capacity is being developed.

ENVIRONMENTAL RESTORATION - UE D&D, OAK RIDGE (Continued)

II. Funding Schedule

<u>Program Activity</u>	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>\$ Change</u>	<u>% Change</u>
K-25	\$ 89,806	\$ 53,700	\$ 84,946	\$ 31,246	58
Paducah	46,276	40,560	46,691	6,131	15
Portsmouth	56,354	47,000	47,971	971	2
Other/ORR (Off-Site)	44,371	24,940	28,724	3,784	15
Total, Oak Ridge	\$ 236,807	\$ 166,200	\$ 208,332	\$ 42,132	25

III. Performance Summary

**K-25:**

	<b><u>FY 1996</u></b>	<b><u>FY 1997</u></b>	<b><u>FY 1998</u></b>
• Conduct decommissioning activities at the K-25 facilities.	\$ 63,639	\$ 34,872	\$ 54,189
- In FY 1996, decommissioning of the powerhouse complex and the pond waste cement plant were completed, sediment removal was completed at the cooling towers and several potentially critical deposits were removed from K-25 process equipment. The small scale metal recycle and motor decontamination project generated reusable products and was completed. The Comprehensive Environmental Response Compensation and Liability Act decision documents and D&D task orders were completed for five buildings, and required surveillance and maintenance (S&M) was performed.			
- In FY 1997, a major contract for D&D and material recycle for three of the large process buildings (K-29, K-31, K-33) will be awarded and work will be initiated. Additional uranium deposits will be removed from K-29 and K-25. The K-25 site will initiate complex-wide activities as the Department's lead site for metal recycling. The Cooling Tower Decommissioning project will be completed. Large scale decommissioning, recycling, and motor decontamination projects will be initiated. Required S&M will be performed.			
- In FY 1998, major D&D efforts in the uranium process buildings and uranium deposit removal efforts will continue. Lead site and site specific recycling activities will continue. Additional decommissioning of auxiliary buildings and S&M as required will continue.			

ENVIRONMENTAL RESTORATION - UE D&D, OAK RIDGE (Continued)

III. Performance Summary (Continued)

**K-25:**

	<b><u>FY 1996</u></b>	<b><u>FY 1997</u></b>	<b><u>FY 1998</u></b>
• Conduct remediation activities at various K-25 areas.	\$ 16,541	\$ 10,212	\$ 22,110
- In FY 1996, field characterizations for the K-901 Pond and K-1070-A Contaminated Burial Ground, and Phase II construction for K-1070 SW 31 Spring were completed; the K-1650 and K-1752 Underground Storage Tank remedial actions were completed; regulatory documents were prepared and required S&M was performed.			
- In FY 1997, the remedial design of the K-1070 Operable Unit will be completed; the K-1417 and K-1419 Resource Conservation and Recovery Act (RCRA) Closures will be completed; construction activities at the K-901 Pond and K-1070 Operable Unit will be initiated; and regulatory documentation will be prepared, and required S&M will be performed.			
- In FY 1998, initiate Environmental Protection Agency (EPA)/State agreed upon early remedial actions for 1420 runoff, K-27/29 source control, K-1007 pond, K-1070 C/D Trench and Mitchell Branch, K-1400 plume, evaluate remedial alternatives for the K-25 Watershed; a treatability study or technology demonstration for the K-1070-A Contaminated Burial Ground will be conducted; construction activities for the K-901 Pond and the K-1070 Operable Unit will continue; and required S&M will be performed.			
• Provide for Landlord activities at K-25.	9,626	8,616	8,647
- In FY 1996, landlord services and infrastructure maintenance activities were conducted including, replacement of K-1650 and K-1652 Underground Storage Tanks, repair of landslide road damage, K-1200 roof repair, and K-1401 decontamination.			
- In FY 1997, landlord services and infrastructure maintenance activities will be conducted.			
- In FY 1998, landlord services and infrastructure maintenance activities will be conducted.			
<b>Total K-25, Oak Ridge</b>	<b>89,806</b>	<b>53,700</b>	<b>84,946</b>

**Paducah:**

	<b><u>FY 1996</u></b>	<b><u>FY 1997</u></b>	<b><u>FY 1998</u></b>
• Conduct remediation and D&D activities at Paducah Waste Area Groups (WAGs) 1, 6, 7 and 17.	\$ 3,505	\$ 4,071	\$ 3,775
- In FY 1996, the WAG 17 field work investigation was completed and a removal action for soils in AOC 124 of WAG 17 was completed. The development of decision documents for WAGs 1 and 7 commenced; remedial investigation work plan for WAG 6 was started.			
- In FY 1997, the ROD for WAGs 1 and 7 will be completed and remedial action activities will be initiated; development of decision documents for WAG 17 will commence, as well as the field work investigation for WAG 6.			
- In FY 1998, assessment for WAG 6 and construction of remedial action for WAGs 1 and 7 will be completed; ROD for WAG 17 will be completed (No Further Action).			

ENVIRONMENTAL RESTORATION - UE D&D, OAK RIDGE (Continued)

III. Performance Summary (Continued)

**Paducah:**

	<b><u>FY 1996</u></b>	<b><u>FY 1997</u></b>	<b><u>FY 1998</u></b>
<ul style="list-style-type: none"> <li>Conduct remediation activities at Paducah WAGs 22 and 23.                             <ul style="list-style-type: none"> <li>In FY 1996, the development of decision documents for WAG 23 were initiated and field work investigation for WAG 22 was completed.</li> <li>In FY 1997, the WAG 22 (7 and 30) remedial investigation document and the WAG 22 (2 and 3) feasibility study document will be developed; remedial action activities for WAG 23 will be initiated.</li> <li>In FY 1998, the WAG 22 ROD will be signed; remedial action activities for WAG 23 will be completed.</li> </ul> </li> </ul>	2,461	2,353	3,608
<ul style="list-style-type: none"> <li>Conduct ground water construction, operations, and monitoring activities at the Paducah North East (NE) and North West (NW) ground water plumes.                             <ul style="list-style-type: none"> <li>In FY 1996, the NE Plume interim action was initiated and the NW Plume ROD #1 interim action operations continued; ground water monitoring activities are ongoing.</li> <li>In FY 1997, NE Plume interim remedial construction will be completed; operations will commence, and the NW Plume #1 interim action operations will continue; ground water program monitoring activities will be conducted.</li> <li>In FY 1998, NE Plume and NW Plume ROD #1 interim action operations will continue; ground water program monitoring activities will be conducted.</li> </ul> </li> </ul>	9,070	7,284	7,205

ENVIRONMENTAL RESTORATION - UE D&D, OAK RIDGE (Continued)

III. Performance Summary (Continued)

**Paducah:**

	<b><u>FY 1996</u></b>	<b><u>FY 1997</u></b>	<b><u>FY 1998</u></b>
<ul style="list-style-type: none"> <li>Conduct remediation for Paducah WAGs 9, 11, 12, 15, 27, 28, and 29.                             <ul style="list-style-type: none"> <li>In FY 1996, assessment activities (i.e., field work investigation) for WAG 15 was completed; demonstration of the LASAGNA (in-situ electro-osmosis system) technology was initiated.</li> <li>In FY 1997, assessment activities (e.g., project plan preparation, field work investigation, decision document preparation) will be ongoing for WAGs 3, 9, 15, 27, and 28, and SWMU 91 (LASAGNA)</li> <li>In FY 1998, assessment activities will be ongoing for WAGs 3, 11, 19, 27, and 28; remedial action activities will be started for SWMU 91.</li> </ul> </li> </ul>	\$ 6,331	\$ 5,373	\$ 11,819
<ul style="list-style-type: none"> <li>Conduct required facility surveillance, maintenance, and safe shutdown operations at Paducah.                             <ul style="list-style-type: none"> <li>In FY 1996, required S&amp;M activities were conducted; completed the C-409 and C-400-C RCRA closures; and completed construction of the Phase I Waste Storage Facility.</li> <li>In FY 1997, carry out required S&amp;M and safe shutdown activities.</li> <li>In FY 1998, carry out required S&amp;M and safe shutdown activities.</li> </ul> </li> </ul>	7,738	3,300	3,321
<ul style="list-style-type: none"> <li>Conduct Waste Treatment, Storage, and Disposal activities at Paducah.                             <ul style="list-style-type: none"> <li>In FY 1996, RCRA waste was shipped off-site for recycle and disposal; 340,000 lbs. of waste was shipped to the Toxic Substances Control Act (TSCA) incinerator for treatment; 10,000 lbs. of waste was shipped for disposal; and 25 mixed waste streams were characterized. Completed construction of the new solid waste landfill and the construction of a cap at the old landfill (Cell 3).</li> <li>In FY 1997, waste will continue to be shipped off-site; 193,000 lbs of waste will be characterized and shipped to the TSCA incinerator; site demonstration of VORTEC (Vitrification Unit Technology) will be completed; and field demonstration will be started. Operation of the new solid waste landfill will be initiated; and 20 mixed waste streams will be characterized.</li> <li>In FY 1998, RCRA waste will continue to be shipped off-site for recycling and disposal and the solid waste landfill will continue to be operated; operation of the RCRA, TSCA, and low-level waste (LLW) storage facilities will continue; operations of the VORTEC treatment unit will continue; 24,000 drums of waste will be processed.</li> </ul> </li> </ul>	17,171	18,179	16,963
<b>Total Paducah, Oak Ridge</b>	<b>46,276</b>	<b>40,560</b>	<b>46,691</b>

**Portsmouth:**

	<b><u>FY 1996</u></b>	<b><u>FY 1997</u></b>	<b><u>FY 1998</u></b>
<ul style="list-style-type: none"> <li>Conduct activities at the Portsmouth GDP associated with X-705 A&amp;B and X-611 Corrective Measures Study (CMS) decisions; the X-705 A/B Corrective Measures Implementation (CMI) document; and the X-705A Incinerator Equipment Removal and Superstructure Demolition.</li> </ul>	\$ 8,281	\$ 1,135	\$ 469

ENVIRONMENTAL RESTORATION - UE D&D, OAK RIDGE (Continued)

III. Performance Summary (Continued)

**Portsmouth:**

	<b><u>FY 1996</u></b>	<b><u>FY 1997</u></b>	<b><u>FY 1998</u></b>
<ul style="list-style-type: none"> <li>Conduct activities associated with X-749/120 and X-701 at Portsmouth.                             <ul style="list-style-type: none"> <li>In FY 1996, the X-749/X-120 treatment study, and the Pilot Ground Water Treatment Unit interim action and the X-701C Neutralization Pit remedial action was completed.</li> <li>In FY 1997, the Quad I X-749/120 treatment study will continue and CMS decisions for X-749/120 and X-701B ground water CMS will be completed.</li> <li>In FY 1998, the CMI for X-749/120 and X-701B ground water will be initiated.</li> </ul> </li> </ul>	4,112	327	600
<ul style="list-style-type: none"> <li>Conduct remediation activities at the Peter Kiewit Landfill.                             <ul style="list-style-type: none"> <li>In FY 1996, In FY 1996, carried out planning efforts to prepare for remediation of the landfill.</li> <li>In FY 1997, the CMI will be initiated, and the CMS decision for the landfill will be completed.</li> <li>In FY 1998, the CMI will be completed.</li> </ul> </li> </ul>	102	5,635	3,692
<ul style="list-style-type: none"> <li>Conduct other Portsmouth remediation and decommissioning activities including the ground water protection program .                             <ul style="list-style-type: none"> <li>In FY 1996, the final reports on site-wide Background Sampling Investigation and Baseline Ecological Risk Assessment, and the draft report on Human Health Risk Assessment were submitted to the appropriate agencies; the West Drainage Ditch interim action was initiated; pond drainage was completed, as was the ground water recirculation test, the X-344A risk based closure, and the X-740 risk based/clean closure.</li> <li>In FY 1997, ground water plume treatment operations and S&amp;M will be conducted, and RCRA corrective measures for the biodegradation area Trichloroethylene Plume will be initiated; the CMI for X-231A and RCRA Facility Investigations for Quad I, II, III, IV and site-wide air will be completed; and the Surfactant Test will be completed and the Supplemental Environmental Project site-wide Surface Drainage CMI will be initiated.</li> <li>In FY 1998, the CMIs for X-231A and the site-wide Surface Drainage will be completed, and CMIs for X-734 and X-744Y/G will be initiated; the CMS decisions for X-230J7, X-734, and X-744Y/G, and the Supplemental Environmental Project will be completed.</li> </ul> </li> </ul>	12,788	10,655	11,126

ENVIRONMENTAL RESTORATION - UE D&D, OAK RIDGE (Continued)

III. Performance Summary (Continued)

**Portsmouth:**

	<b><u>FY 1996</u></b>	<b><u>FY 1997</u></b>	<b><u>FY 1998</u></b>
• Carry out Portsmouth waste treatment, storage, and disposal activities.	\$ 31,071	\$ 29,248	\$ 32,084
- In FY 1996, 4.1 million pounds of mixed waste and 702,400 pounds of LLW was disposed; 194,000 pounds of TSCA liquid waste was treated; and 15 mixed waste streams were characterized.			
- In FY 1997, 3.0 million pounds of mixed waste and 276,000 pounds of LLW will be disposed; 308,200 pounds of mixed waste and mixed PCB will be treated; and 200,000 pounds of waste batteries will be recycled.			
- In FY 1998, 2.38 million pounds of mixed waste and 188,100 pounds of LLW will be disposed, 303,600 pounds of mixed waste and mixed PCB will be treated; and approximately 1200 B25 boxes of chrome sludge (LLW) will be repackaged and disposed.			
<b>Total Portsmouth, Oak Ridge</b>	<b><u>56,354</u></b>	<b><u>47,000</u></b>	<b><u>47,971</u></b>

**Other/ORR (Off-Site):**

	<b><u>FY 1996</u></b>	<b><u>FY 1997</u></b>	<b><u>FY 1998</u></b>
• Provide for a variety of crosscutting site efforts in support of the three GDPs, including program management support, Agreement-In-Principle activities, waste management efforts (contracting for off-site disposal and development of an off-site disposal cell), and technical integration.	44,371	24,940	28,724
<b>Total Other/ORR (Off-Site), Oak Ridge</b>	<b><u>44,371</u></b>	<b><u>24,940</u></b>	<b><u>28,724</u></b>

<b>TOTAL, OAK RIDGE .....</b>	<b><u>\$ 236,807</u></b>	<b><u>\$ 166,200</u></b>	<b><u>\$ 208,332</u></b>
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ENVIRONMENTAL RESTORATION - UE D&D, OAK RIDGE (Continued)

III. Performance Summary (Continued)

**Explanation of Funding Changes FY 1997 to FY 1998:**

**K-25:**

• Implementation of large scale decommissioning and recycling projects at the K-25 site in FY 1998.	\$ 19,317
• Initiation of EPA/State agreed upon early K-25 remedial actions results in increased funding requirements.	11,929
Subtotal	31,246

**Paducah:**

• The Paducah site will be completing remedial action activities for WAGs 1, 7, and 23. These actions include the WAG 23 PCB contaminated soil removal using the VORTEC vitrification system for treatment, and the use of institutional controls, deed restrictions, and monitoring activities for the WAG 1 and 7 C-746K Landfill. The Paducah site will also be conducting field work investigation for the characterization of the suspected sources of off-site contamination. Preparation for remedial action of these units will also commence.	6,131
Subtotal	6,131

**Portsmouth:**

• Remediation efforts at the Peter Kiewit Landfill will be completed in FY 1997.	-1,943
• Additional Portsmouth funding is needed due to increase in waste treatment, storage, and disposal costs and increase in decommissioning activities.	2,914
Subtotal	971

**Other/ORR (Off-Site):**

• Additional funding is required to support off-site disposal of RCRA wastes delayed from FY 1997.	3,784
Subtotal	3,784

<b>Total Funding Change, Oak Ridge .....</b>	<b>\$ 42,132</b>
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ENVIRONMENTAL RESTORATION - UE D&D  
(Dollars in Thousands)

HEADQUARTERS

I. Mission Supporting Goals and Objectives

The Headquarters account includes the budget for partial payment of the Uranium/Thorium claims as described in the Program Performance Summary section of this budget request.

II. Funding Schedule

<u>Program Activity</u>	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>\$ Change</u>	<u>% Change</u>
Headquarters	\$ 42,000	\$ 34,000	\$ 40,456	\$ 6,456	19
Total, Headquarters	\$ 42,000	\$ 34,000	\$ 40,456	\$ 6,456	19

III. Performance Summary

<u>Headquarters:</u>	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
• Provide for partial payment of approved Uranium/Thorium (Title X) reimbursement claims.	\$ 42,000	\$ 34,000	\$ 40,456
<b>TOTAL, HEADQUARTERS .....</b>	<b>\$ 42,000</b>	<b>\$ 34,000</b>	<b>\$ 40,456</b>

Explanation of Funding Changes FY 1997 to FY 1998:

<u>Headquarters:</u>	
• Increase is associated with providing larger partial payment to Uranium/Thorium licensees.	\$ 6,456
<b>Total Funding Change, Headquarters .....</b>	<b>\$ 6,456</b>